

BALL'S FERRY BRIDGE

State Route 57 Spanning Oconee River (Irwinton-Wrightsville  
Road)

Toomsboro

Wilkinson County

Georgia

HAER No. GA-153

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record  
Southeast Regional Office  
National Park Service  
U.S. Department of the Interior  
100 Alabama Street NW  
Atlanta, Georgia 30303

# HISTORIC AMERICAN ENGINEERING RECORD

## BALL'S FERRY BRIDGE

HAER No. GA-153

Location: State Route 57 (Irwinton-Wrightsville Road) spanning the Oconee River  
7.8 miles east of Toombsboro, Washington-Wilkinson County Line,  
Georgia

U.S.G.S. 7.5 minute Oconee, Georgia, quadrangle  
Universal Transverse Mercator coordinates:  
17.316583.3628613

Date of Construction: 1938

Engineer: Georgia State Highway Bridge Department

Builder: Georgia State Highway Bridge Department

Present Owner: Georgia Department of Transportation  
#2 Capitol Square, SW, Atlanta, Georgia 30334-1002

Present Use: Vehicular Bridge  
To be demolished 2007

Significance: The 21-span steel-stringer bridge is one of the earliest identified in Georgia to use the technologically important pin and hanger connection, and is also considered to be one of the largest of the technologically significant continuous-cantilever design bridges built by the State Highway Department from the late 1920s to the 1940s. The bridge is historically and technologically distinguished based on its age, completeness and design.

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Date: July 2007

## Introduction

The Ball's Ferry Bridge is a 21-span steel stringer bridge featuring one 3-span haunched continuous-cantilevered section with pin and hanger connections. Considered to be a major technological breakthrough of the times, the bridge was constructed in place of the old ferry, which had traversed the Oconee River to the Washington County line. The bridge carries State Route 57, (Irwinton-Wrightsville Road), a two-lane state highway over the river and its flood plain in a forested rural setting.

## Background

Georgia's State Highway Department was created in 1916, focusing on road improvement and expansion as a means to bring Georgia and the South into the new industrial age. Progressive proponents of the highway system argued that good roads meant increased tourism and trade, which in turn translated to an economic competitiveness with other regions of the country not seen since prior to the Civil War.<sup>1</sup> Part of the good roads initiative included finding new technologies that made highway building efficient, cost-effective, and low maintenance. This effort included the rapid and prompt construction of bridges. The fourth annual report from the state highway engineer concluded: "When the Highway Department came into existence...one of the most urgent needs of the State road system was the immediate construction or reconstruction of a large number of bridges. Many sections of the State were served by ferries or low water bridges and traffic was frequently interrupted by high water."<sup>2</sup> LaGrange, Georgia native Searcy B. Slack was appointed as the state bridge engineer in 1920.

Highly qualified, Slack had graduated from the University of Georgia and Harvard University with degrees in civil engineering. Slack had also served as consultant on some of the Department's first federal-aid bridge projects in Brooks, Oconee, and Dooly counties in 1919. During his tenure, he supervised the construction of 217 reinforced concrete bridges, building each with careful consideration for the project's required timeline, materials, conditions and expenses. Slack's promotion of new designs and updated methods of construction made Georgia a national leader in efficient and modern bridge construction.<sup>3</sup> Under Slack's direction, the Department was particularly adept at designing steel stringer bridges, new technology that

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<sup>1</sup> Howard Lawrence Preston, "Dirt Roads to Dixie: Accessibility and Modernization in the South, 1885-1935," Knoxville: University of Tennessee Press, p. 42.

<sup>2</sup> Georgia Department of Transportation and Georgia Department of Natural Resources, "Historic Bridge Survey," September 1981, p. 28.

<sup>3</sup> Lichtenstein and Associates, "Historic Contexts: Bridge Building Technology in Georgia." *Historic Bridge Inventory Update* [Unpublished manuscript on file with the Georgia Department of Transportation's Office of Environment/Location, Atlanta, Georgia, 1997], p. 44.

focused on an economy of materials and labor. These bridges featured continuous beams, shiplap connection detail, cantilevered sections, and beams.<sup>4</sup>

The New Deal era prompted the state to reorganize its bridge-building efforts. New State Bridge Engineer Clarence B. Crocker replaced Slack in 1933 and immediately began making policy changes that were more in keeping with Depression standards, calling for bridge designs “that could be built with a maximum of manual labor and a minimum of heavy equipment and machinery.”<sup>5</sup> Crocker improved upon Slack’s steel stringer bridge designs, focusing on using the technology of the pin and hanger connection. Between 1936 and 1940, Crocker directed the construction of 680 bridges, and went on to oversee the largest volume of bridge construction in the state’s history. His tenure ended in 1956.

### The Ball’s Ferry Bridge

Located at an old river crossing of the Upper Uchee Indian trail, Ball’s Ferry had been established in 1806 by John Ball, a Revolutionary War veteran, to provide transport access to the river. Wilkinson County’s economic mainstay was cotton and food crops, and their shipment to market was vital. Ball’s Ferry served as one of the important river crossings for the farmers.<sup>6</sup> During the Civil War, the crossing at Ball’s Ferry was the site of a battle on November 23, 1864 that resulted in approximately thirty casualties. During Sherman’s march eastward through Georgia to the sea, part of his right wing attempted to cross the Oconee River at the ferry’s location on pontoon boats. Confederate Major General Henry C. Wayne’s force of approximately 1,200 men successfully stymied the Union troops’ movements from the eastern bank of the river.<sup>7</sup> Today, a historic marker located near the northwest corner of the present bridge marks the event.

The ferry remained operational until 1938 when the state highway department took over State Route 57 (Irwinton-Wrightsville Road) and improved the road from dirt to hard-surface. A new bridge that was to replace the old ferry also became a priority. Funding for the bridge was provided by the federal National Recovery Act, a New Deal program that funded several highway and bridge improvements from 1932 to 1941. Contractors for the bridge’s construction were the Nashville Bridge Company, Albert Lyons of Rogersville, Tennessee, and W.G. Sheperd of Atlanta, Georgia.

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<sup>4</sup> Lichtenstein and Associates, “Historic Contexts,” p. 47.

<sup>5</sup> Ibid, p. 54.

<sup>6</sup> Elizabeth Woodward, “Wilkinson County,” *The New Georgia Encyclopedia*, 3 March 2006, 17 July 2007 <<http://www.newgeorgiaencyclopedia.org>>.

<sup>7</sup> “Ball’s Ferry/Toombsboro,” *Sherpa Guides*, 17 July 2007 <<http://www.sherpaguides.com>>.

The Ball's Ferry Bridge, completed in 1938, was a major accomplishment of Crocker and the bridge department, and represents the earliest extant suspended section bridge with the pin and hanger detail in Georgia. Despite former State Bridge Engineer Slack's emphasis on the building of continuous-cantilever bridges, their design was not initially accepted by other bridge engineers because of their concerns that stress factors could not be adequately calculated. As a result, most of the continuous cantilever designs in the late 1920s and early 1930s rarely exceeded 90' in length. Yet the bridge at Ball's Ferry is a 21-span, 1,684-foot long bridge, making it technologically distinguished for its day. The bridge's pin and hanger connection design, while rare, was not unheard of prior to 1938. The technology had been applied to long-span cantilever truss bridges as early as the late nineteenth century. But the Ball's Ferry Bridge was one of the earliest and most challenging of the long-span applications of the continuous cantilever deck girder design.<sup>8</sup> Today, a plaque located at the southeast corner of the bridge documents the date and builders of the structure. Digital copies of the original plans for the Ball's Ferry Bridge are located at the Georgia Department of Transportation's Office of Bridge Inspection in an archival digital database.<sup>9</sup>

The Ball's Ferry Bridge represents the best of Georgia's advancements in bridge building technology and road improvements. Technologically distinguished for its era, the bridge reflects the evolution and application of the pin and hanger design to long-span high-level bridges. A major accomplishment of the Highway Department, the Ball's Ferry Bridge is a testament to their dedication and effort to put Georgia's road network at the forefront of the nation's transportation development.

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<sup>8</sup> Lichtenstein and Associates, *Georgia Historic Bridge Survey*, August, 1995.

<sup>9</sup> The Office of Bridge Inspection is located at the Georgia Department of Transportation's Office of Bridge Maintenance, Building 24, Room 415, 935 E. Confederate Avenue, Atlanta, GA. 30316. Tel: 404-635-8734. There are six drawings, each labeled "*Bridge No. 2, State Highway Board of Georgia, Bridge Department.*"